

Amendment and Response

Applicant: Judith Maget et al.

Serial No.: 10/574,151

Filed: February 6, 2007

Docket No.: I432,132,101/P32281

Title: INJECTION-LOCKED OSCILLATOR CIRCUIT

IN THE CLAIMS

Please cancel claim 26.

Please amend claims 13, 14, 21, 25, 27-32 as follows:

1.-12. (Cancelled)

13. (Currently Amended) An injection-locked oscillator circuit comprising at least two oscillator stages, each oscillator stage comprising:

- an inductance;
- a capacitance connected in parallel with the inductance;
- at least one output node;
- a coupling-switching element subcircuit comprising at least one coupling-switching element which is coupled in parallel with the inductance and the capacitance in such a way that in each case precisely one coupling-switching element is present serially; and
- at least one input terminal formed by means of the control terminal of the coupling-switching element;

wherein the oscillator stages of the injection-locked oscillator circuit are coupled by means of the coupling-switching element subcircuits and configured such that the oscillator stages synchronize each other.

14. (Currently Amended) The injection-locked oscillator circuit ~~as claimed~~ of claim 13, wherein each oscillator stage has two output terminals at which signals that are differential with respect to one another are present.

15. (Previously Presented) The injection-locked oscillator circuit of claim 13, wherein the coupling-switching element subcircuit has two additional coupling-switching elements which are connected up to one another and are connected in parallel with the coupling-switching elements connected up to one another.

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16. (Previously Presented) The injection-locked oscillator circuit of claim 13, wherein the coupling-switching elements are transistors.

17. (Previously Presented) The injection-locked oscillator circuit of claim 16, wherein the transistors are NMOS and/or PMOS transistors.

18. (Previously Presented) The injection-locked oscillator circuit of claim 17, wherein a respective one of the transistors connected in parallel is a PMOS transistor and the other transistor connected in parallel is an NMOS transistor.

19. (Previously Presented) The injection-locked oscillator circuit of claim 13, wherein the capacitances are formed by means of varactors.

20. (Previously Presented) The injection-locked oscillator circuit of claim 13, wherein the oscillator stages have an active element.

21. (Currently Amended) The injection-locked oscillator circuit ~~of~~of claim 13, wherein an even number of oscillator stages are coupled to form an injection-locked oscillator circuit.

22. (Previously Presented) The injection-locked oscillator circuit of claim 21, wherein the number of input terminals of each oscillator stage is equal to the number of oscillator stages of the injection-locked oscillator circuit.

23. (Previously Presented) The injection-locked oscillator circuit of claim 22, wherein the injection-locked oscillator circuit has four oscillator stages, each oscillator stage having four input terminals and two output terminals and two of the input terminals being coupled to the output terminals of a preceding oscillator stage of the injection-locked oscillator circuit in the signal flow direction, and the other two input terminals being coupled to the output terminals of the downstream injection-locked oscillator circuit in the signal flow direction.

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24. (Previously Presented) The injection-locked oscillator circuit of claim 13, wherein the injection-locked oscillator circuit has an odd number of oscillator stages.

25. (Currently Amended) A semiconductor comprising:

a first inductance coupled in parallel with a first capacitance;

a first switching circuit coupled in parallel with the first inductance and capacitance, the first switching circuit having a control terminal configured as a first input;

a second inductance coupled in parallel with a second capacitance;

a second switching circuit coupled in parallel with the second inductance and capacitance, the second switching circuit having a control terminal configured as a second input; and

means for coupling the first and second switching circuits to form an injection-locked oscillator circuit,

wherein the first inductance, first capacitance and first switching circuit form a first oscillator stage and the second inductance, second capacitance and second switching circuit form a second oscillator stage, wherein each oscillator stage has two output terminals with differential signals, wherein the oscillator stages of the injection-locked oscillator circuit are coupled by means of the switching circuits such that the oscillator stages synchronize each other.

26. (Cancelled).

27. (Currently Amended) The circuit of claim ~~26~~25, wherein the coupling-switching elements are transistors.

28. (Currently Amended) The circuit of claim ~~26~~25, wherein the transistors are NMOS and/or PMOS transistors.

29. (Currently Amended) The circuit of claim ~~26~~25, wherein a respective one of the

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transistors connected in parallel is a PMOS transistor and the other transistor connected in parallel is an NMOS transistor.

30. (Currently Amended) The circuit of claim ~~26~~25, wherein the capacitances are formed by means of varactors.

31. (Currently Amended) The circuit of claim ~~26~~25, wherein the oscillator stages have an active element.

32. (Currently Amended) The circuit of claim ~~of 26~~25, wherein an even number of oscillator stages are coupled to form an injection-locked oscillator circuit.